

NRC COMMENTS

TO THE INITIAL SUBMITTAL OF THE

WRITTEN EXAM ON ES-401-9 AND THE OPERATING TEST

FOR THE BRAIDWOOD INITIAL EXAMINATION - JULY 2002

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
6S	H													S	New
8R	HF													S	New NRC: Memory. LICENSEE: Agree.
9B	H													S	New
12S	H													S	New
17B	H													S	New

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).
- Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - More than one distractor is not credible.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
- Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
 - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
 - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - The question requires reverse logic or application compared to the job requirements.
- Check questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).
- Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
- At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
23R	H													S	New NRC: Not appropriate RO tasks: procedure transition, assessment of conditions, and selection of appropriate procedures is SRO function. LICENSEE: Question rewritten to RO level.
26R	H													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT." NRC: Question clarity better using the "NOT" format. Will accept original question.
27S	F													S	New
33S	H													S	New
36B	H													S	New
44R	H													S	New
46B	H													S	New
52B	H													S	New
55S	F													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
57R	H													S	New
58S	H													S	New
60B	H													S	New
63B	H													S	New
73B	H													S	New
78R	H													S	New

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
83R	H											X		U	New NRC: KA is ability to perform procedural actions, but question stem asks for prediction of system response. LICENSEE: Rewrote question to meet KA.
Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
84B	H													S	New
87S	H													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT." NRC: Question clarity better using the "NOT" format. Will accept original question.
90R	H													S	New LICENSEE: Made correction, replaced "EP.0" with "ES-0.1" in b. and d..
92S	H													S	New
98B	H													S	New
104S	H													S	New
112R	H													S	New
114R	F													S	New
119S	H													S	New
1B	F													S	New
2B	H													S	New
3B	H													S	Bank
4B	F													S	Bank
5S	H													S	Bank
7B	F													S	Bank

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
10B	H						X							U	Bank NRC: Two correct answers as written. Insert "Only..." at beginning of distractors b. and c. to correct. LICENSEE: Agree.
11R	H													S	Bank
13B	F													S	New
Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
14B	H													S	New
15S	H							X						S	New: NRC: Stem does not indicate that temperature exceeded design temperature. Alarms at 118 degrees F. Not SRO Only type question (RO knowledge) LICENSEE: Stem contains sufficient information to determine that design limit was exceeded. Not taking credit for an SRO Only question; however, it is only on the SRO exam.
16S	H													S	New
18S	F													S	New
19R	F H													S	New NRC: ROs required level of knowledge for refuel equipment? LICENSEE: Reviewed tasks and lesson plans. ROs are not trained and tested on this information, although some ROs run refueling equipment. As a result, KA was rejected, new KA randomly selected (00WE13K102) and new question written.
20B	F													S	Bank
21B	H													E	Modified NRC: Rewrite stem in past tense to clarify past from present, and what is presently happening. LICENSEE: Rewrote question in past tense.
22S	H													S	New
24B	F													S	Bank LICENSEE: Removed "critical" from stem.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
25S	H													S	New
28B	F													S	Modified Corrected mistake, replaced "ELEC-2" with "ELEC-1."
29B	F													S	New
30B	H							X				X		U	New NRC: TS basis not required RO knowledge; also, KA requires reasons for responses as applied to accidental gaseous radwaste release, but the question stem asking for which phase of LBLOCA provides basis for shifting AB ventilation. LICENSEE: Revised question to make RO level of knowledge and to meet KA.
Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
31B	F													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
32B	H													S	Modified
34B	F													S	Bank
35B	H													S	Bank
37B	H													S	Modified
38B	F													S	New
39B	H													S	Bank LICENSEE: Replaced "early stages" with "first two minutes" in stem to clarify time.
40B	F													S	New
41B	H													S	New
42B	F													S	New
43B	H													S	Bank
45B	H													S	Bank
47B	F													S	New

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
48R	F													S	Bank
49R	H													S	Modified
50B	H													S	Bank
51S	H													S	New
53S	H													S	New
54B	F													S	Bank
56B	F													S	Bank
Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
59B	F													S	Bank
61B	H													S	Bank Corrected stem mistake, replaced "red" with "orange" path.
62R	H													S	Modified
64R	F													E	Bank NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
65R	F													S	New
66B	H													S	Bank
67B	F													S	New
68S	H													S	Bank
69R	H													S	Bank
70B	F													S	New
71B	H													S	Bank
72B	H													S	Bank
74B	F													S	New

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
75R	F													S	New
76R	H													S	Modified
77B	H													S	Modified
79B	F													S	Bank
80B	H													S	New
81B	F													S	New
82B	H													S	New
Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
85B 85S	F													S	Modified NRC: ROs required level of knowledge for refuel equipment? LICENSEE: Reviewed tasks and lesson plans. ROs are not trained and tested on this information, although some ROs run refueling equipment. Question was kept as an SRO Only question; however, the RO exam KA was rejected, new KA randomly selected (027000K201) and new question written (for the RO exam).
85R	F													S	New
86B	H													S	New
88B	H													S	Bank
89S	F													S	New
91R	F													S	Bank
93R	F													S	New
94R	H													S	Bank
95R	F													S	New LICENSEE: Add to stem, "If all of the following loads are started, which ONE will draw the largest run current?"
96B	H													S	Bank

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
97B	H													S	Bank
99B	F													S	Bank
100R	H													S	Bank
101B	H													S	Bank
102B	F													S	Bank
103B	F													S	Modified
105B	F													S	New

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
106B	F													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
107R	F													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
108S	F													S	Modified
109B	F													S	Bank
110B	H													S	Modified
111S	F													S	Modified
113B	F													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
115S	F													S	Bank
116S	H													S	Modified
117S	F													S	New
118B	H													S	Modified
120S	F													S	Bank
121B	F													S	Modified
122B	F													S	Bank.
123R	H													S	Bank
124R	H													E	Bank NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
125R	H													S	Bank
126S	H													S	Modified

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
127S	F													E	New NRC: Negative stem, NUREG 1021, Appendix B (p. 10 of 26) says to avoid. LICENSEE: Rewrote question to eliminate "NOT" format.
128B	F													S	New
129S	F													S	New

NOTE:

1. First 30 questions used for sample review.
2. First 30 questions received independent verification of references.
3. 100% of questions received KA verification.
4. Total questions is 130 based on resolution to question 85.
5. SRO/RO: New 54/50; Bank 32/38; Modified 14/12; Fundamental 44/44; Higher 56/56

H F (1)

Not appropriate RO (1)

Negatively worded stem (Appendix D, p. 10 of 26) (10; 7%RO;6%SRO)

KA (2)

Two correct answers (1)

Braidwood Operating Exam Comments

Administrative JPMs

1. Generic comment: arrange JPM so that back pages are in the order that examiner will give to applicant. From back to front: a) back page is Initial Conditions and Initiating Cue; b) next page is the first handout...etc.

A.1.a (SRO) S-42, Review Calorimetric (2.1.7)

NRC Comments:

- 1) Step *3., should be "N-44" not "N-42."
- 2) Step *3., rather than hand the applicant a corrected D-2 sheet after he/she identifies the problem, have the applicant correct the problem on the original sheet (line through and initial, or go to the SM(?) to correct the problem. Otherwise, suppose the applicant incorrectly identifies another problem, the examiner won't be able to hand him/her a corrected copy.

Licensee: 1) and 2), agreed.

A.1.b (SRO) S-02QPTR, Review QPTR Calculation (2.1.33)

NRC Comments: None.

A.2 (SRO) S-02BDPS, Review BDPS Out of Service (2.2.13)

NRC Comments:

- 1) JPM p.1 lists the incorrect KA, should be 2.2.13.
- 2) If examiner does not hand the applicant the last sheet of the tag out, the applicant could be cued by the lack of "***** END OF ISOLATION POINTS *****" statement at the bottom of the sheet and consequently identify there was a missing sheet without really identifying the missing valves.

Licensee: 1) and 2), agreed.

A.3 (SRO) S-41, Review a Release Package (2.3.6)

NRC Comments: None

A.4 (SRO) S-05, Classify and Screen Event for Reportability (2.4.30)

NRC Comments: None

A.1.a (RO) N-02SHDLY, Perform Unit Common Shiftly Daily Rounds (2.1.18)

NRC Comments:

- 1) JPM p.1 lists the incorrect KA, should be 2.1.18.

Licensee: 1) Agreed.

A.1.b (RO) N-18, Review QPTR Calculation (2.1.19)

NRC Comments: None.

Braidwood Operating Exam Comments (continued)

A.2 (RO) N-02CS007, Perform 1CS007A Valve Stroke Surveillance (2.2.12)

NRC Comments: None.

A.3 (RO) N-32, Perform RM-11 Setpoint Change for Rad Release (2.3.11)

NRC Comments: None

A.4 (RO) N-160, Activate Emergency Response Data System (ERDS) (2.4.29)

NRC Comments:

- 1) Step *3., add note for examiner, "Attachment 1 procedure starts here."

Licensee: Agreed.

System JPMs

B.1.a N-03, ECCS / Increase SI Accumulator Pressure

NRC Comments:

- 1) Replace this JPM. Low level of difficulty, not discriminating, not good exam evaluation JPM.

Licensee: Will replace.

B.1.b N-84, EDG / Synchronize SAT to a bus being fed by a EDG

NRC Comments: None.

B.1.c N-27C, Perform Emergency Boration

NRC Comments: None.

B.1.d N-11a, RCS / Excess Letdown Operations

NRC Comments: None.

B.1.e N-118, CCW / Respond to a RCP Thermal Barrier Leak

NRC Comments: None.

B.1.f N-119, PRT / Drain the Prezzurizer Relief Tank

NRC Comments: None.

B.1.g N-57a, SG / AFW Check Valve Leakage

NRC Comments: None.

B.2.a N-138, ESW / Align Fire Protection Cooling to CV Pump after loss of SX

NRC Comments: None.

B.2.b N-34, APE / Locally Align the Fire Hazzards Panel

NRC Comments: None.

Braidwood Operating Exam Comments (continued)

B.2.c N-91, ESF / Locally Reset Feedwater Isolation

NRC Comments: None.

Scenarios (1,2,3,4)

Scenario 1

NRC Comments:

- 1) Errata, p. 4, middle of page, should be "Event 4"
- 2) Errata, p. 11, down 1/3rd of page, should be "...WITH..."

Licensee: Corrected.

Scenario 2

NRC Comments: None.

Scenario 3

NRC Comments:

- 1) Event 6, All MSIVs fail closed at power. Label as a Major Transient. Nothing operator can do about it.

Licensee: Agreed.

Scenario 4

NRC Comments: None.